

AFT TUBE ONLY -> HUP AUG 25

Work Order ID 72321



Page 1

Friday, July 22, 2011 10:37:31 AM

Item ID: D3391-025

Accept



Setup Start



Revision ID:

Stop



Item Name: Aft Tube Assembly

Start Date: 7/22/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 8/25/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan: *W*

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D3391

Rev H/ DEO

100

0.00



MORI SEIKI CNC LATHE LARGE

Mori Seiki

Memo

0.00

Mori Seiki CNC Lathe Large

Turn as per Folio FA599 Rev: ____ & Dwg D3391 Rev: ____

scribe batch # on fwd end at 90 degree

110

QC2- Inspect parts off machine FAI/FAIB

0.00



QC

Memo

0.00

Quality Control

111

QC8- Inspect parts - second check

0.00



QC

Memo

0.00

Quality Control

1 Ø
mm. L 11/08/15

1 Ø
mm. L 11/08/15

2 11/18/22

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 72321

Friday, July 22, 2011 10:37:31 AM



Page 2

Item ID: D3391-025

Accept



Setup Start



Revision ID:

Stop



Item Name: Aft Tube Assembly

Start Date: 7/22/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 8/25/2011 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals:

Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

120



HAAS 1

HAAS CNC vertical machine #1

HAAS CNC VERTICAL MACHINING #1

0.00

Memo

0.00

1-Machine as per Folio FA 599 Rev A4 & Dwg D3391 Rev 11-08-18
2-Deburr

①

130



QC

Quality Control

QC2- Inspect parts off machine FAI/FAIB

0.00

11-08-18

Memo

0.00

140



QC

Quality Control

QC8- Inspect parts - second check

0.00

Memo

0.00

11-08-22

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 72321

Friday, July 22, 2011 10:37:31 AM



Page 3

Item ID: D3391-025

Accept



Setup Start



Revision ID:

Stop



Item Name: Aft Tube Assembly

Start Date: 7/22/2011 Start Qty: 1.00

Required Date: 8/25/2011 Req'd Qty: 1.00



Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

150

0.00



Skidtubes

Skidtubes

Memo

0.00

Skidtubes

I-Drill (PILOT HOLE) aft cap holes per Dwg D3391 using DF8803

DP

11-8-22

160

0.00



CNC Bend 1

BENDING MACHINE - SKIDTUBES

Memo

0.00

CNC Delta 100 Bender

Form as per Dwg D3391 Using Bend Prog 3391025

DP

11-8-22

170

0.00



QC

QC5- Inspect part completeness to step on W/O

Memo

0.00

Quality Control

3.96

L. O. BE11/08/22

Work Order ID 72321

Friday, July 22, 2011 10:37:31 AM



Page 4

Item ID: D3391-025

Accept



Setup Start



Revision ID:

Stop



Item Name: Aft Tube Assembly

Start Date: 7/22/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 8/25/2011 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID Tool # Plan Code Accept Qty Reject Qty Reject Number Insp. Stamp

180

0.00



Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1-Open Aft cap pilot hole to .208" as per Dwg D3391

2-Drill float bag holes using DT8809 as per Dwg D3391(Holes marked "A" Only.

3-Drill wearplate holes as per Dwg D3391 using DT8878(Mid Tube) & DT8217
Wearplate Jig.

*****Do Not Open To Finished Size*****

4-Drill Wearshoe holes as per DWG D3391 using DT8939 locating from 2
previously drilled aft wearplate holes.

5-Open wearplate holes to 0.250" and c'bore as per dwg D3391

6-Open up all wearshoe, wearplate to 0.297" and float bag holes to 0.328" as per
Dwg D3391.

7-Deburr

BE 10/08/23

Work Order ID 72321

Friday, July 22, 2011 10:37:31 AM



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Item ID: D3391-025

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Setup Start



Revision ID:

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Item Name: Aft Tube Assembly

Start Date: 7/22/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 8/25/2011 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals:

Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

190

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

5 w/58/23



200

Chemical Conversion Coat per QSI005 4.1

0.00



HandFinish

Memo

0.00

Hand Finishing

Wli
11/08/23

210

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control



11-8-23

Work Order ID 72321

Friday, July 22, 2011 10:37:31 AM



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Item ID: D3391-025

Accept



Setup Start



Revision ID:

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Item Name: Aft Tube Assembly

Start Date: 7/22/2011 Start Qty: 1.00



Cust Item ID:

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Customer:

Reference:

Run Start



Approvals: Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

220

0.00



Skidtubes

Skidtubes

Memo

0.00

Instal spacers as per dwg D3391

A/R Magnabond 6398 Batch: M116677

exp. date: 12/01/15

cure time 12hrs as per QSI0015

230

0.00



QC

QC5- Inspect part completeness to step on W/O

Memo

0.00

Quality Control

235

0.00



HandFinish

Pressure Wash per QSI005 4.3

Memo

0.00

AND REALODINE AS PER PAR09-043

Hand Finishing

Dh
11/08/23

8 uloz/74

(H)

IX Ø M 11/08/24

Work Order ID 72321

Friday, July 22, 2011 10:37:31 AM



Page 7

Item ID: D3391-025

Accept



Setup Start



Revision ID:

Stop



Item Name: Aft Tube Assembly

Start Date: 7/22/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 8/25/2011 Req'd Qty: 1.00

Customer:

Reference:

Run Start



Approvals:

Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID Tool # Plan Accept Reject Reject Insp.
Code Qty Qty Number Stamp

240

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00



Powdercoat

Powder Coating

Memo

START TIME:

OVEN TEMPERATURE:

FINISH TIME:

3:15
320°F
3:45

0.00

120 M/L 11/08/24

250

QC3- Inspect Part Finish

0.00



QC

Quality Control

Memo

0.00

1 BR 11-8-25.

260

HandFinishing

0.00



HandFinish

Hand Finishing

Memo

1-Install inserts as per Dwg D3391

2-Install Aft Cap as per Dwg D3391

A/ R Sikaflex-241/-291

Sikaflex expiry date:

118393
12-5.

0.00

1 BR 11-8-25.

Work Order ID 72321

Friday, July 22, 2011 10:37:31 AM

Page 8

Item ID: D3391-025

Accept

Revision ID:

Item Name: Aft Tube Assembly

Setup Start

Stop

Start Date: 7/22/2011 Start Qty: 1.00

Required Date: 8/25/2011 Req'd Qty: 1.00

Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

270



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

8/10/25

AL

Memo

0.00

280



Packaging

Packaging

Identify as per dwg & Stock Location: _____

0.00

Memo

0.00

290



QC

Quality Control

QC21- Final Inspection - Work Order Release

0.00

Memo

0.00

11/8/25

11/8/25

MF
11-08-25

Picklist Print

Friday, July 22, 2011 10:37:28 AM

Page 1

Work Order ID: 72321

Parent Item: D3391-025

Parent Item Name: Aft Tube Assembly



Start Date: 7/22/2011

Required Date: 8/25/2011

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev B 06-02-07 ECN773 dwg rev. D EC
 IPP Rev:C 06-03-28 Update Manuf. Instructions JLM
 IPP rev D 07.03.20 revF dwg EC
 IPP rev E 07.11.07 rev G dwg ecn 1053p EC verified by: DD
 IPP Rev:F 07-11-13 ECN 1056 DD verified by: EC
 IPP Rev:G 08-09-10 revH as per dwg DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6014-090		Manufactured	No			100	Each	1.0000	1	1			



ALUMINUM EXTRUSION

D66179



1 mm 11/08/15

Location Loc Qty Loc Code

LG

1

56572

1

D3670-4-200

Manufactured No

230

Each

60.0000

4

4



SPACER



Location Loc Qty Loc Code

LG

60

70822

18

71850

42

72851

4

Dh
11/08/15

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Friday, July 22, 2011 10:37:28 AM

Page 2

Work Order ID: 72321

Parent Item: D3391-025

Parent Item Name: Aft Tube Assembly

Start Date: 7/22/2011

Required Date: 8/25/2011

Start Qty: 1.00

Required Qty: 1.00

D2646

Manufactured

No

270

Each

111.0000

1

1



Aft Cap



BR 11-8-25

Location

Loc Qty

Loc Code

FP004

58

68280 ✓

58

FP006

5

62678

5

FP-4

39

70945

1

71070

38

fp5

9

71038

9

D3537-1

Manufactured

No

270

Each

7.0000

1

1



Wearpad



BR 11-8-25

Location

Loc Qty

Loc Code

FP017

7

70687

5

69817

2

70686

2

D3537-7

Manufactured

No

270

Each

2.0000

1

1



Wearpad



BR 11-8-25

Location

Loc Qty

Loc Code

FP019

2

71689

2

69320

Friday, July 22, 2011 10:37:28 AM

Shop Packet Print

Page 2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Friday, July 22, 2011 10:37:28 AM

Page 3

Work Order ID: 72321

Parent Item: D3391-025

Parent Item Name: Aft Tube Assembly



Start Date: 7/22/2011

Required Date: 8/25/2011

Start Qty: 1.00

Required Qty: 1.00

D3553-1

Manufactured No

270

Each

4.0000

1

1



Gasket



BR 11-8-25.

Location

Loc Qty

Loc Code

FP013

4

56568 ✓

4

1

D3553-3

Manufactured No

270

Each

28.0000

1

1



Gasket



BR 11-8-25.

Location

Loc Qty

Loc Code

FP

20

31631

20

FP013

8

53480 ✓

8

1

D3672-1

Manufactured No

270

Each

920.0000

2

2



Phenolic Washer



BR 11-8-25.

Location

Loc Qty

Loc Code

ST074

918

64177 ✓

418

66821

500

1

ST077

2

52505

2

1

Friday, July 22, 2011 10:37:28 AM

Shop Packet Print

Page 3

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Friday, July 22, 2011 10:37:28 AM

Work Order ID: 72321

Parent Item: D3391-025

Parent Item Name: Aft Tube Assembly

Start Date: 7/22/2011

Required Date: 8/25/2011

Start Qty: 1.00

Required Qty: 1.00

ALS4-1032-130 Purchased

No

260

Each

3,132.000

14

14



Insert



BR 11-8-25.

Location

Loc Qty

Loc Code

ST281

1008

117331

8

118386

1000

ST282

2124

117717

124

118237

1744

118312

256

14.

ALS4-1032-225

Purchased

No

270

Each

973.0000

12

12



Insert



BR 11-8-25.

Location

Loc Qty

Loc Code

ST282

973

110768

104

117717

9

118386

860

12

AN3C4A

Purchased

No

270

Each

1,396.000

6

6



BOLT



BR 11-8-25

Location

Loc Qty

Loc Code

ST350

1396

117313

2

117688

332

117795

500

117872

22

118012

500

118112

40

6

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Friday, July 22, 2011 10:37:28 AM

Work Order ID: 72321

Parent Item: D3391-025

Parent Item Name: Aft Tube Assembly



Start Date: 7/22/2011

Required Date: 8/25/2011

Start Qty: 1.00

Required Qty: 1.00

AN3C5A Purchased

No

270

Each

1,039.000

4

4



Bolt



BR 11-8-25

Location

Loc Qty

Loc Code

FP-A

7

115835

7

ST350

1032

116419

28

116549

42

117343 ✓

500

117764

300

117872

162

AN960C10L

NAS1149C0332
R

✓ Purchased

No

270

Each

0.0000

10

10



washer



118306

10

BR 11-8-25

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order: 72321
Description: Float Skidtube (412)		Part Number: D3391-3
Inspection Dwg: D3391	Rev: H	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Lathe Section						
14.000	+/-0.010	14	✓		tape	mm.l -02
3.500	+/-0.010	3.500	✓		vern	JF-01
88.93	+/-0.030	88.910	✓		tape	mm.l -02
Ø3.200	+/-0.010	3.201	✓		micr	CNC-05
88.93	+/-0.030	88.910	✓		tape	mm.l -02
Ø3.750	+/-0.010	3.750	✓		micr	CNC-05
30° x 160° chamfer	+/-0.010	30° x 160	✓		vern	JF-05

Measured by: M.M.L	Date: 11/08/15
Audited by: [Signature]	Date: 11/8/22

HAAS Section						
1.526	+0.000/-0.030	1.526	✓		DP-02	
7.500	+/-0.010	7.498	✓			
27.750	+/-0.010	27.750	✓			
31.750	+/-0.010	31.750	✓			
35.250	+/-0.010	35.280	✓			
3.300	+/-0.010	3.295	✓			
0.200	+/-0.010	.200	✓		11	
3.520	+/-0.010	3.520	✓		22.4	
0.687	+0.010/-0.000	.689	✓		22.02	
R0.062	+/-0.010	2.062	✓			
Ø0.484	+0.005/-0.001	.485	✓		11	

Measured by: [Signature]	Date: 11.8.17
Audited by: [Signature]	Date: 11/8/22

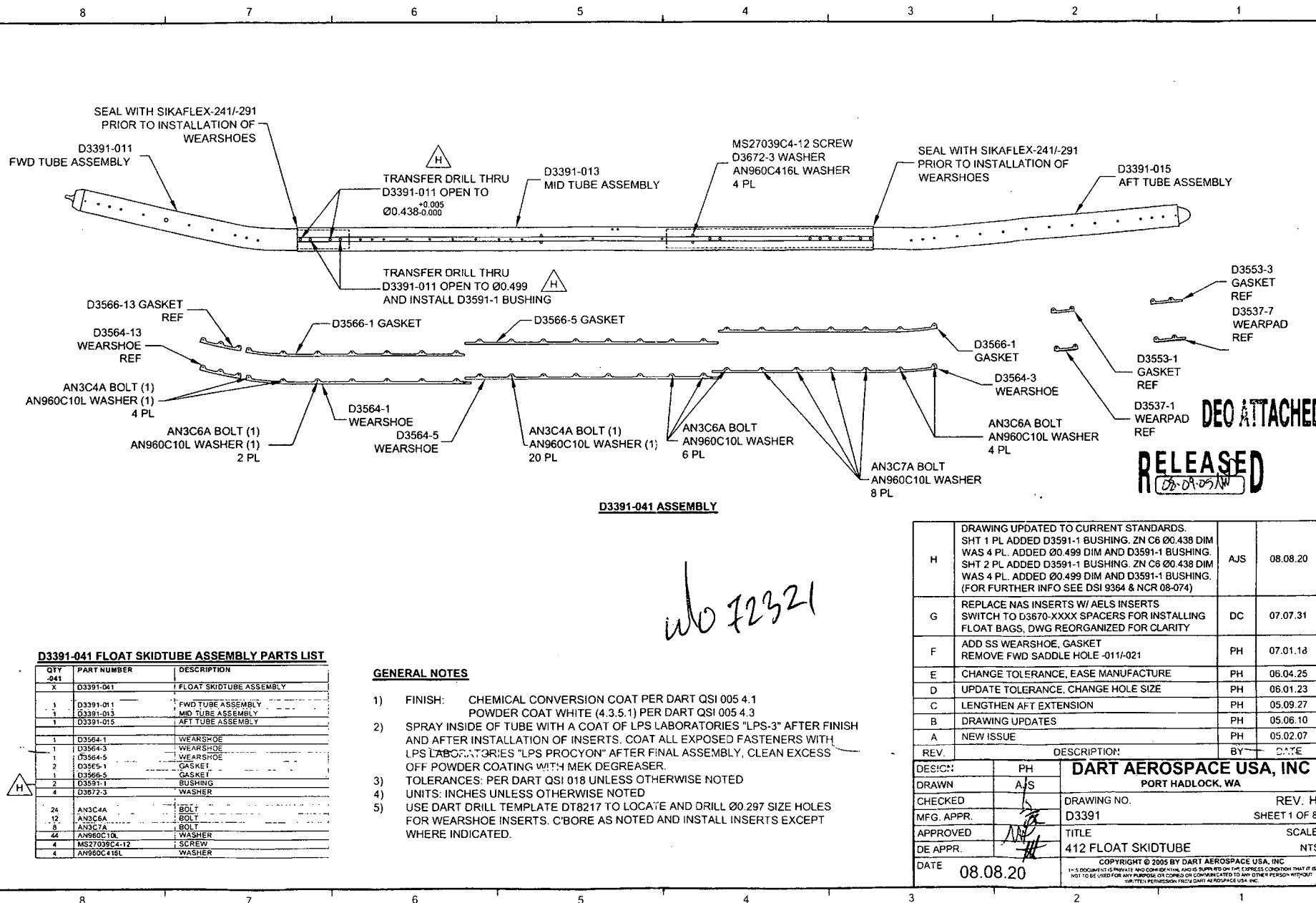
Rev	Date	Change	Revised by	Approved
A	06.04.24	New Issue P/O D3391-015/-025	KJ/JLM	
B	06.06.19	Dwg revision update	KJ/JLM	
C	07.04.20	Ø0.208 dimension removed	KJ/JLM	
D	07.09.06	0.400 dimension removed	KJ/JLM	
E	07.11.23	Dwg Rev. updated	KJ/EC/DD	
F	09.04.27	Dimensions updated per Rev H and NCR09-028	KJ/JLM	
G	09.11.16	Dimension 0.200 removed	KJ	
H	11.06.21	Dimension 44.995 removed	KJ	

10501

11111

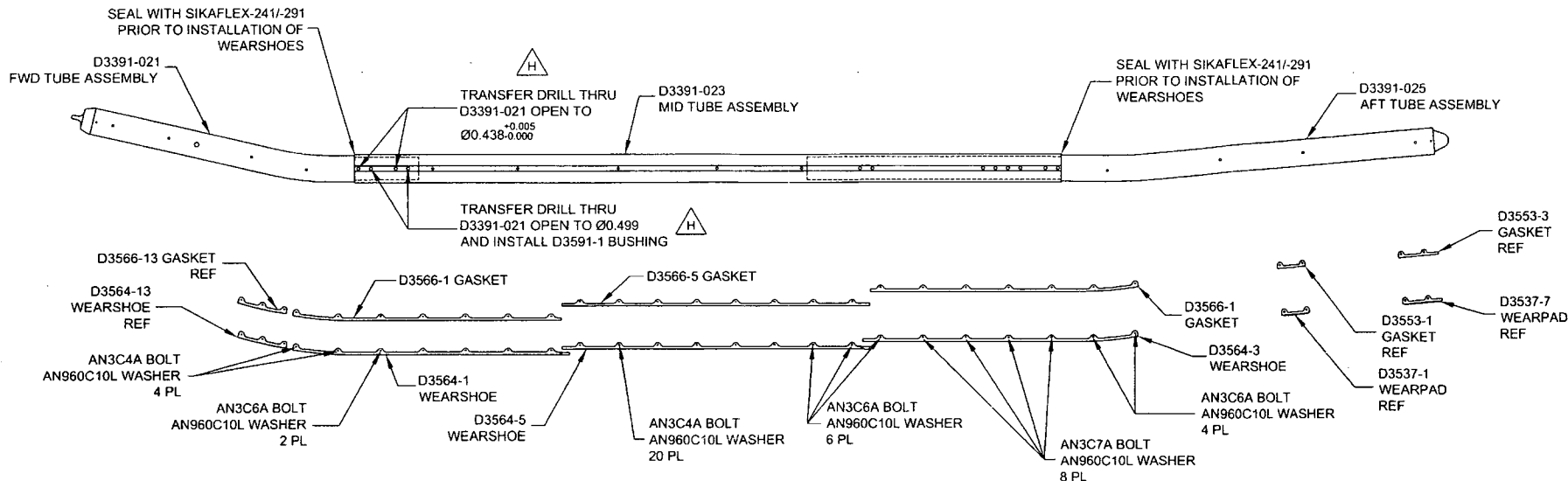
11111

11111



DEO ATTACHED
RELEASED
08-09-05 NW

H	DRAWING UPDATED TO CURRENT STANDARDS. SHT 1 PL ADDED D3591-1 BUSHING. ZN C6 Ø0.438 DIM WAS 4 PL. ADDED Ø0.499 DIM AND D3591-1 BUSHING. SHT 2 PL ADDED D3591-1 BUSHING. ZN C6 Ø0.438 DIM WAS 4 PL. ADDED Ø0.499 DIM AND D3591-1 BUSHING. (FOR FURTHER INFO SEE DSI 9364 & NCR 08-074)	AJS	08.08.20
G	REPLACE NAS INSERTS W/ AELS INSERTS SWITCH TO D3670-XXXX SPACERS FOR INSTALLING FLOAT BAGS, DWG REORGANIZED FOR CLARITY	DC	07.07.31
F	ADD SS WEARSHOE, GASKET REMOVE FWD SADDLE HOLE -011/-021	PH	07.01.18
E	CHANGE TOLERANCE, EASE MANUFACTURE	PH	06.04.25
D	UPDATE TOLERANCE, CHANGE HOLE SIZE	PH	06.01.23
C	LENGTHEN AFT EXTENSION	PH	05.09.27
B	DRAWING UPDATES	PH	05.06.10
A	NEW ISSUE	PH	05.02.07
REV.	DESCRIPTION	BY	DATE
DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	AJS	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. H
MFG. APPR.		D3391	SHEET 1 OF 8
APPROVED		TITLE	SCALE
DE APPR.		412 FLOAT SKIDTUBE	NTS
DATE	08.08.20	COPYRIGHT © 2005 BY DART AEROSPACE USA, INC IT IS DOCUMENTED AS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMBINATION TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	



D3391-043 ASSEMBLY

D3391-043 FLOAT SKIDTUBE ASSEMBLY PARTS LIST

QTY	PART NUMBER	DESCRIPTION
1	D3391-043	FLOAT SKIDTUBE ASSEMBLY
1	D3391-021	FWD TUBE ASSEMBLY
1	D3391-023	MID TUBE ASSEMBLY
1	D3391-025	AFT TUBE ASSEMBLY
1	D3564-1	WEARSHOE
1	D3564-3	WEARSHOE
1	D3564-5	WEARSHOE
2	D3566-1	GASKET
1	D3566-3	GASKET
2	D3566-5	GASKET
2	D3591-1	BUSHING
24	AN3C4A	BOLT
12	AN3C6A	BOLT
8	AN3C7A	BOLT
44	AN960C10L	WASHER

GENERAL NOTES

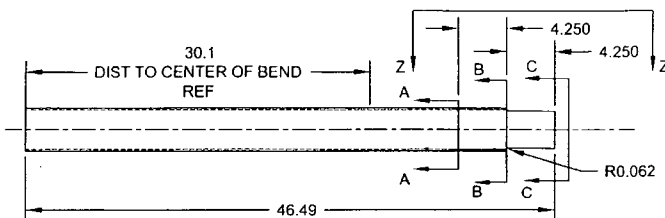
- 1) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 2) SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH
AND AFTER INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH
LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY. CLEAN EXCESS
OFF POWDER COATING WITH MEK DEGREASER.
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL Ø0.297 SIZE HOLES
FOR WEARSHOE INSERTS. C-BORE AS NOTED AND INSTALL INSERTS EXCEPT
WHERE INDICATED.

72321

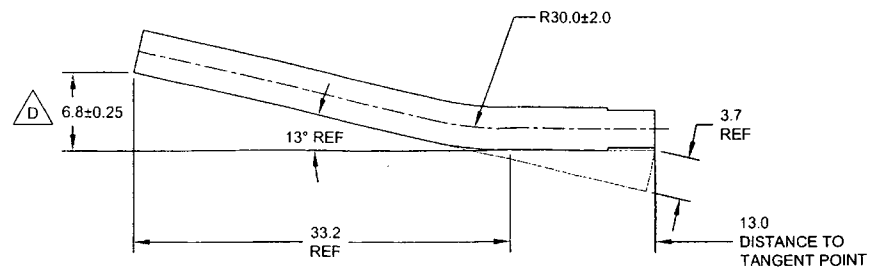
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RELEASED
08-01-25

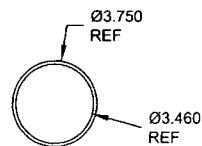
DESIGN		PH		DART AEROSPACE USA, INC	
DRAWN		AUS		PORT HADLOCK, WA	
CHECKED				DRAWING NO. REV. H	
MFG. APPR.				D3391 SHEET 2 OF 8	
APPROVED				TITLE SCALE	
DE APPR.				412 FLOAT SKIDTUBE NTS	
DATE		08.08.20		<small>COPYRIGHT © 2005 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL. IT IS NOT TO BE REPRODUCED OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	



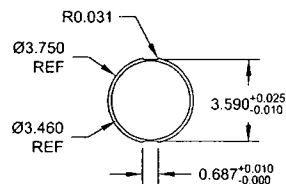
D3391-1 CUTTING DETAIL
(MAKE FROM D6013-047 SKIDTUBE MATERIAL)



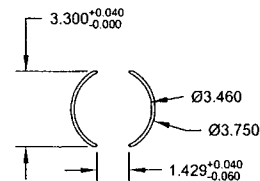
D3391-011/-021 BENDING DETAIL
(MAKE FROM D3391-1)



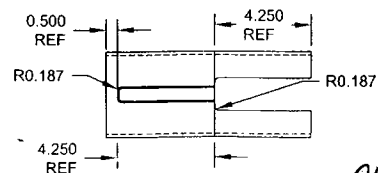
SECTION A-A
SCALE 2X



SECTION B-B
SCALE 2X



SECTION C-C
SCALE 2X

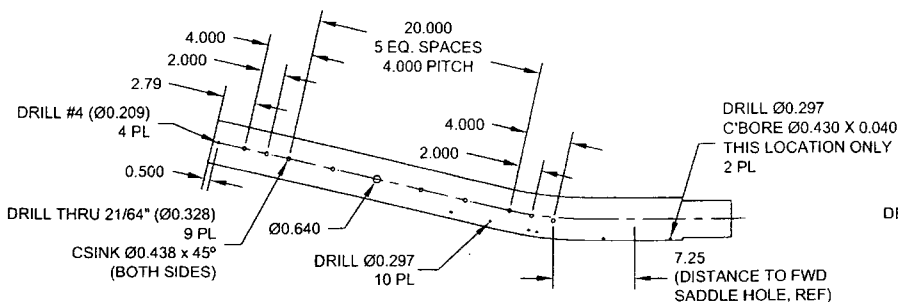


VIEW Z-Z
SCALE 2X

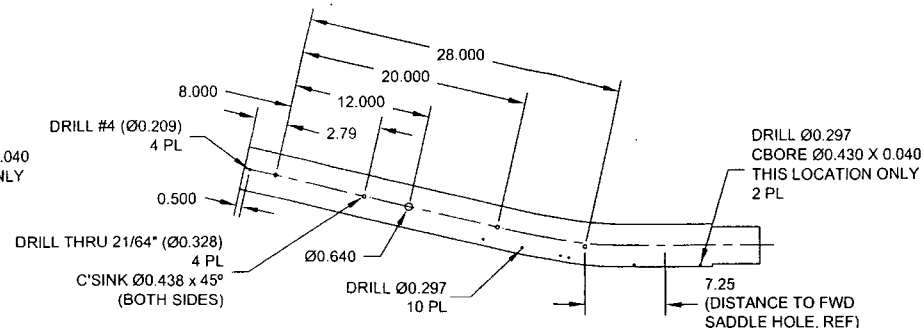
72321

DEO ATTACHED
RELEASED
8-1-05 NW

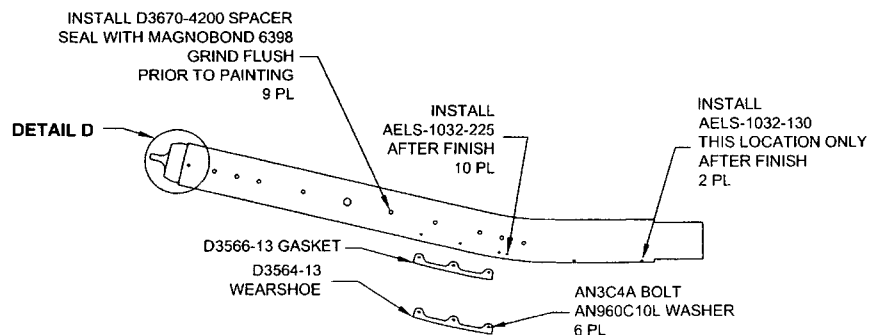
DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	AJS	PORT HADLOCK, WA	
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. H
MFG. APPR.	<i>[Signature]</i>	D3391	SHEET 3 OF 8
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	412 FLOAT SKIDTUBE	NTS
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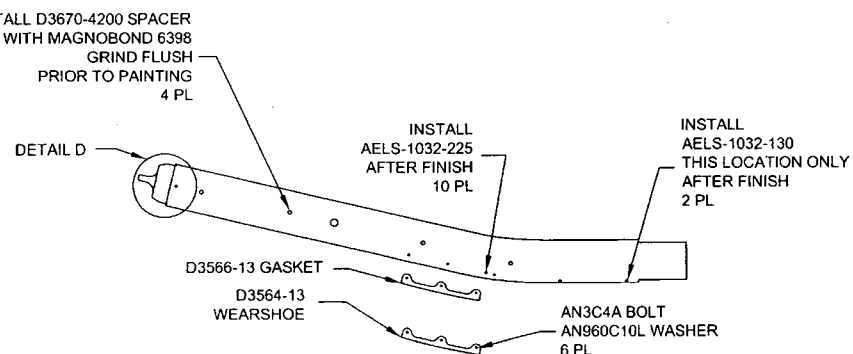
D3391-011 DRILLING DETAIL



D3391-021 DRILLING DETAIL



D3391-011 ASSEMBLY DETAIL

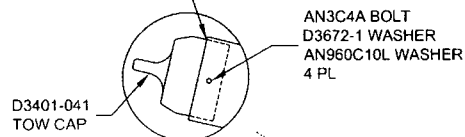


D3391-021 ASSEMBLY DETAIL

D3391-011/-021 FWD TUBE ASSEMBLY PARTS LIST

QTY - 011	QTY - 021	PART NUMBER	DESCRIPTION
X		D3391-011	FWD TUBE ASSEMBLY
	X	D3391-021	FWD TUBE ASSEMBLY
1	1	D6013-047	FWD TUBE
1	1	D3401-041	TOW CAP
1	1	D3564-13	WEARSHOE
1	1	D3566-13	GASKET
9	4	D3670-4200	SPACER
4	4	D3672-1	WASHER
10	10	AN3C4A	BOLT
10	10	AN960C10L	WASHER
2	2	AELS-1032-130	INSERT
10	10	AELS-1032-225	INSERT

SEAL WITH
SIKAFLEX-241/-291



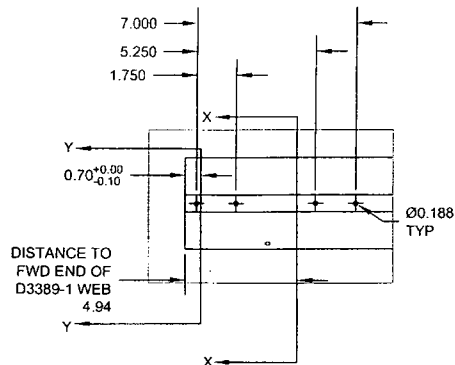
**DETAIL D
SCALE 2X**

DEO ATTACHED

RELEASED
08-07-05 AM

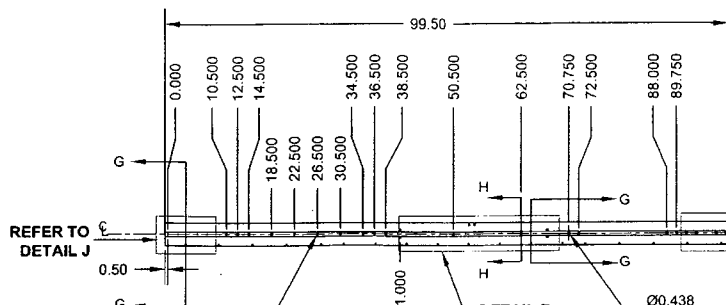
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MFG. APPR.		D3391	SHEET 4 OF 8
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8 7 6 5 4 3 2 1



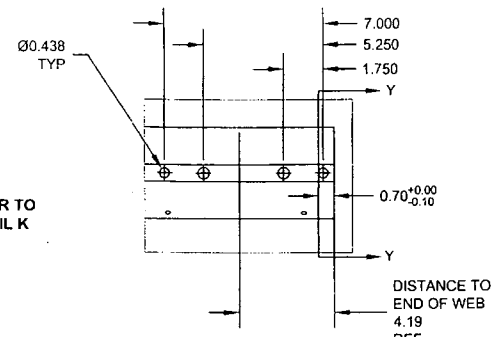
DETAIL J
SCALE 4X

DRILL THRU 21/64" (Ø0.328)
CSINK Ø0.438 X 45° (BOTH SIDES)
12 PL



D3391-013 ASSEMBLY DETAIL

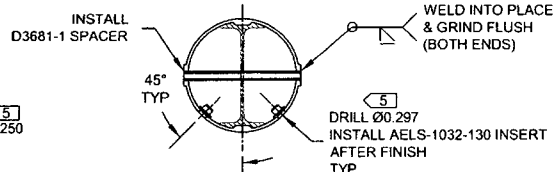
REFER TO
DETAIL K



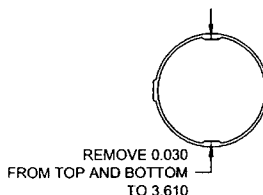
DETAIL K
SCALE 4X



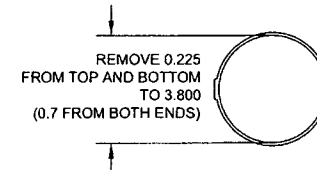
SECTION G-G
SCALE 5X



SECTION H-H
SCALE 5X

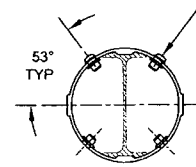


SECTION X-X
SCALE 5X

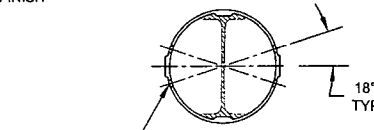


SECTION Y-Y
SCALE 5X

DRILL Ø0.297
INSTALL AELS-1032-130 INSERT
MS27039C1-09 SCREW
D3672-1 WASHER
AN960C10L WASHER
AFTER FINISH
4 PL



SECTION M-M
SCALE 5X



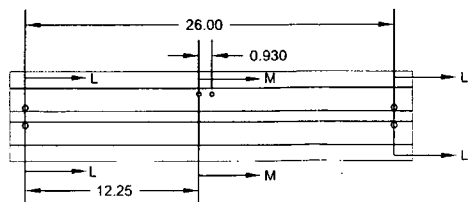
SECTION LL-LL
SCALE 5X

D3391-013 MID TUBE ASSEMBLY PARTS LIST

QTY	PART NUMBER	DESCRIPTION
-013		
X	D3391-013	MID TUBE ASSEMBLY
1	D2500-1-100	EXTRUSION
1	D3389-1	WEB
4	D3672-1	WASHER
4	D3672-3	WASHER
12	D3681-1	SPACER
24	AELS-1032-130	INSERT
4	ALS-428-165	INSERT
4	AN960C10L	WASHER
4	AN960C416L	WASHER
4	MS27039C1-09	SCREW
4	MS27039C4-08	SCREW

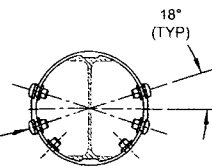
D3391-013 MID TUBE ASSEMBLY

- 1) MATERIAL: MAKE FROM D2500-1-100 EXTRUSION
- 2) INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-241/291 PER QSI 015
- 3) WELDING: PER DART QSI 004



DETAIL E
SCALE NONE

DRILL Ø0.391
INSTALL ALS-428-165 INSERT
MS27039C4-08 SCREW
D3672-3 WASHER
AN960C416L WASHER
AFTER FINISH
4 PL

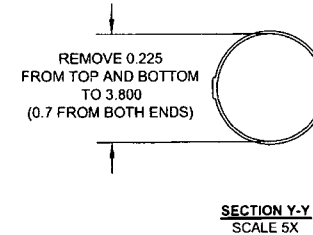
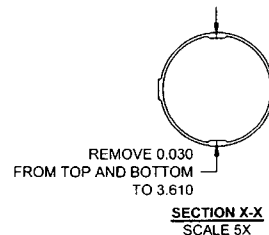
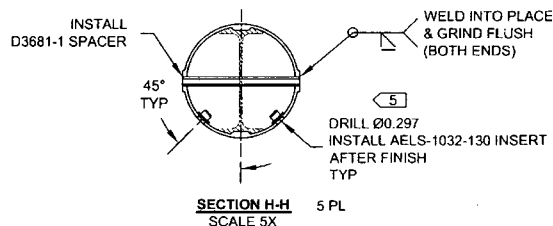
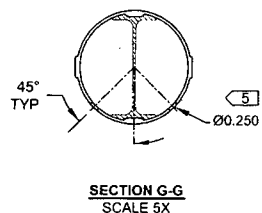
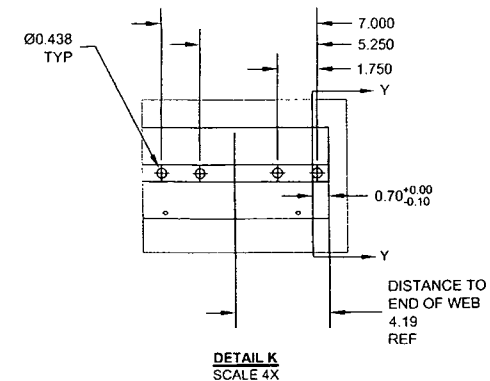
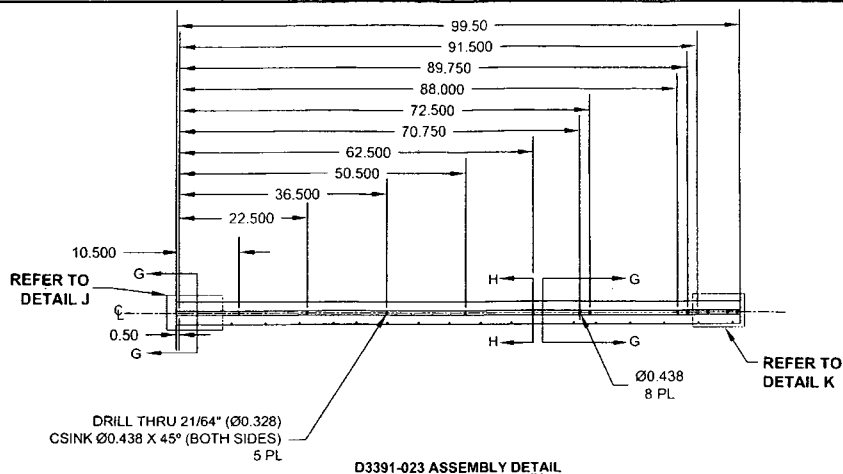
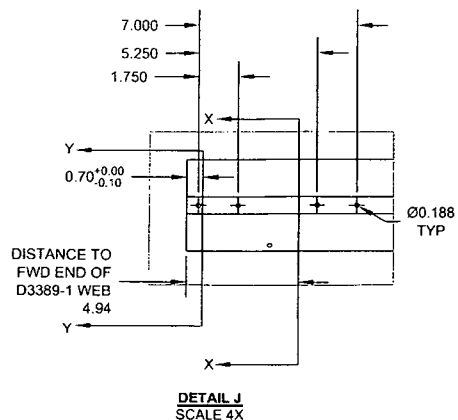


SECTION L-L
SCALE 5X

DEO ATTACHED

RELEASED

DESIGN	CH	DART AEROSPACE USA, INC	
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D3391-023 MID TUBE ASSEMBLY PARTS LIST

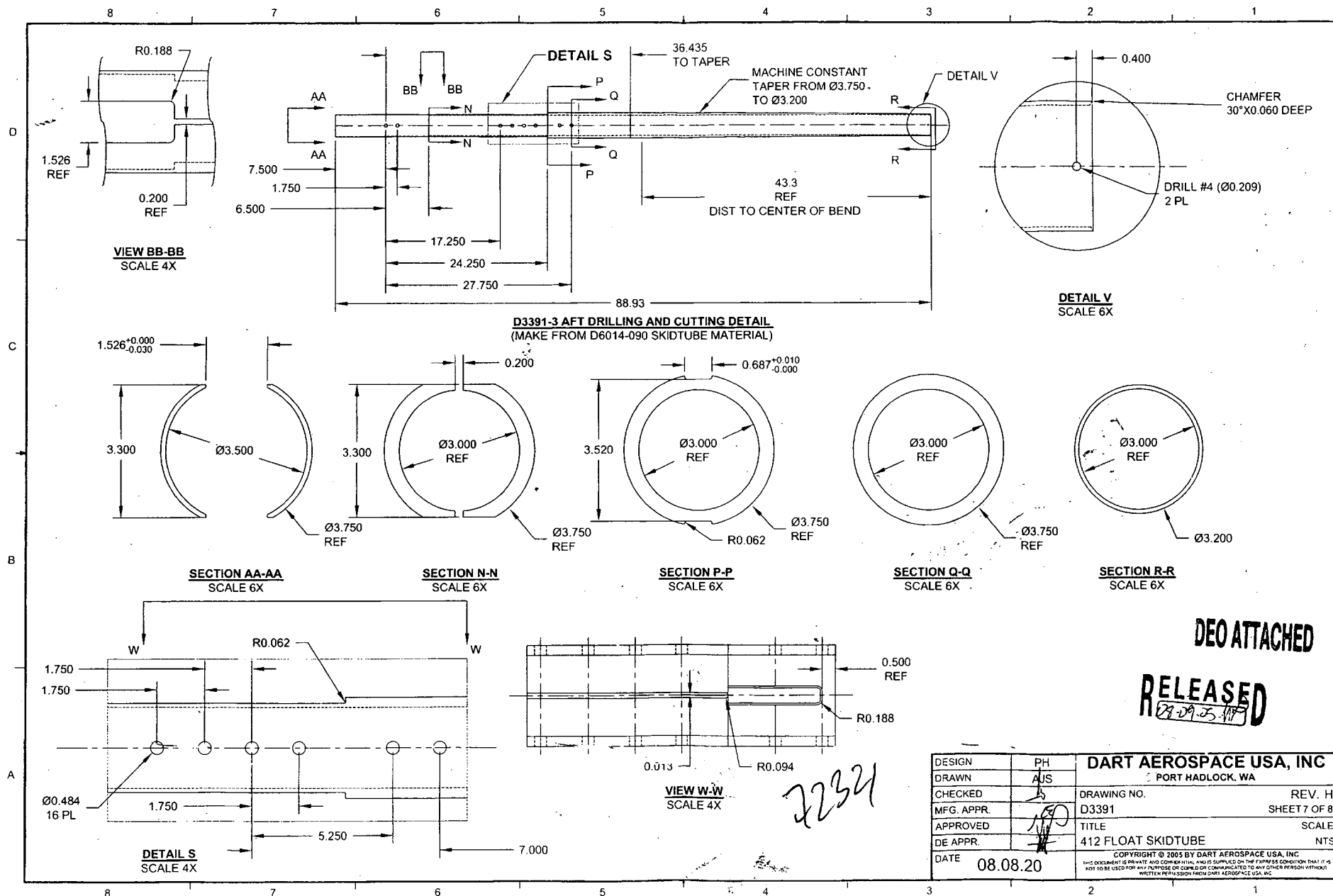
QTY -	PART NUMBER	DESCRIPTION
023		
X	D3391-023	MID TUBE ASSEMBLY
1	D2500-1-100	EXTRUSION
1	D3389-1	WEB
5	D3681-1	SPACER
20	AELS-1032-130	INSERT

D3391-023 MID TUBE ASSEMBLY

- 1) MATERIAL: MAKE FROM D2500-1-100 EXTRUSION
- 2) INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-241/291 PER QSI 015
- 3) WELDING: PER DART QSI 004

DEO ATTACHED
RELEASED
08-09-2014

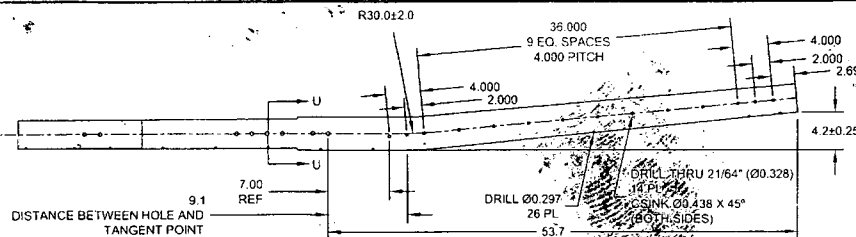
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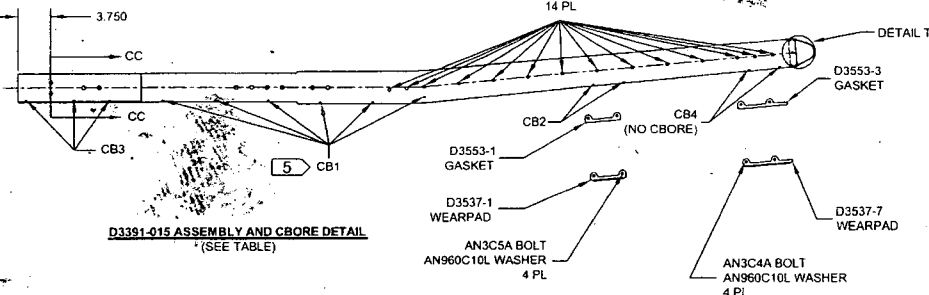
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28-09-05-117

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CHECKED		DRAWING NO.	REV. H
MFG. APPR.		D3391	SHEET 7 OF 8
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D3391-015 BENDING AND DRILLING DETAIL
(SEE CBORE DETAIL BELOW)

INSTALL D3670-4200 SPACER
SEAL WITH MAGNOBOND 6398
GRIND FLUSH
PRIOR TO PAINTING
14 PL



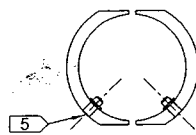
D3391-015 ASSEMBLY AND CBORE DETAIL
(SEE TABLE)

D3391-015/-025 AFT TUBE ASSEMBLY PARTS LIST

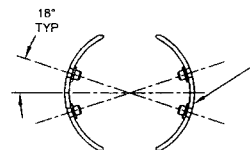
QTY - 015	QTY - 025	PART NUMBER	DESCRIPTION
X		D3391-015	AFT TUBE ASSEMBLY
	X	D3391-025	AFT TUBE ASSEMBLY
1	1	D6014-090	AFT TUBE
1	1	D2646	AFT CAP
1	1	D3537-1	WEARPAD
1	1	D3537-7	WEARPAD
1	1	D3553-1	GASKET
1	1	D3553-3	GASKET
14	4	D3670-4200	SPACER
2	2	D3672-1	WASHER
14	14	AELS-1032-130	INSERT
12	12	AELS-1032-225	INSERT
4		ALS4-428-165	INSERT
6	6	AN3C4A	BOLT
4	4	AN3C5A	BOLT
10	10	AN960C10L	WASHER

CBORE HOLES MARKED CB1-CB4 AS FOLLOWS AND
INSTALL AELS-1032-XXX AFTER FINISH AS NOTED

HOLES MARKED	QTY D3391-015	QTY D3391-025	CBORE	P/N
CB1	12	12	Ø0.430 X 0.170	AELS-1032-225
CB2	4	4	Ø0.430 X 0.170	AELS-1032-130
CB3	6	6	Ø0.430 X 0.040	AELS-1032-130
CB4	4	4	NONE	AELS-1032-130



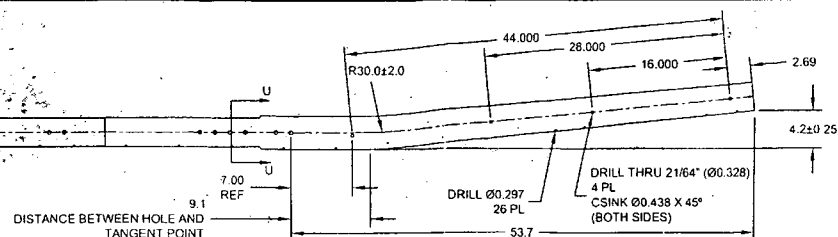
SECTION U-U
SCALE 3X



SECTION CC-CC
SCALE 3X

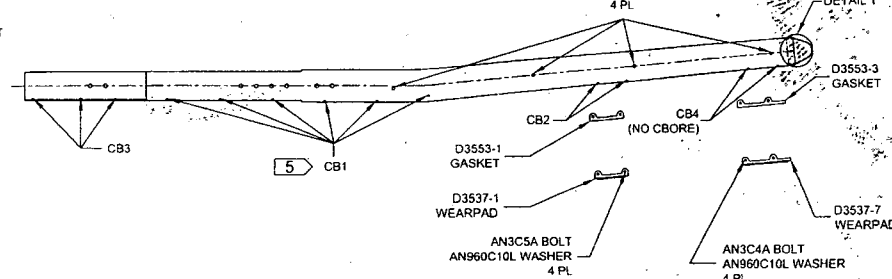
DRILL Ø0.391
CBORE Ø0.516 X 0.040 DEEP
INSTALL ALS4-428-165 INSERT
4 PL

7232

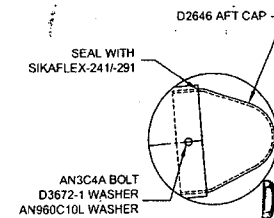


D3391-025 BENDING AND DRILLING DETAIL
(SEE CBORE DETAIL BELOW)

INSTALL D3670-4200 SPACER
SEAL WITH MAGNOBOND 6398
GRIND FLUSH
PRIOR TO PAINTING
4 PL



D3391-025 ASSEMBLY AND CBORE DETAIL
(SEE TABLE)



DETAIL T
SCALE 4X

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08-09-05/14

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DRAWING NO. D3391	TITLE 412 FLOAT SKIDTUBE	REV. H	DART AEROSPACE USA, INC ENGINEERING ORDER		D.E.O. NO. D3391-H-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN <i>UP</i>	CHECKED <i>h</i>	MFG. APPR. <i>h</i>	APPROVED <i>MP</i>		DE APPR. <i>h</i>		
DATE 09.09.23	DATE 04.09.24	DATE 09/09/25	DATE 09/09/30		DATE 09/09/30		

PURPOSE:

LPS-3 IS NO LONGER USED DURING ASSEMBLY OF D3391-041/-043 SKIDTUBES.

CHANGE:

AMEND NOTE 2 OF D3391-041/-043 SKIDTUBE ASSEMBLIES (ZN A6-1, A6-2) AS FOLLOWS:

- 2) ~~SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH~~
~~AND AFTER INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH~~
 LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS
 OFF POWDER COATING WITH MEK DEGREASER.

RELEASED
 2010-02-02

MP

72321

